Release Notes for Release 7.0.1

OFED+ Host Software

D000069-024

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Document Revision History	
Revision A, December 2011	
Changes	**Sections Affected**

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1 Overview of the Release

Introduction

These Release Notes provide a brief overview of the changes introduced into the QLoigc InfiniBand OFED+ Host Software by this release. References to more detailed information are provided where necessary. The information contained in this document is intended for supplemental use only; it should be used in conjunction with the documentation provided for each component.

These Release Notes list the new features of the release, as well as the system issues that were closed in the development of Release 7.0.1.

Audience

The information provided in this document is intended for installers, software support engineers, and service personnel.

If You Need Help

If you need assistance while working with the OFED+ Host Software, contact your QLogic approved reseller or QLogic Technical Support:

- By E-mail:

  support@qlogic.com

- On the Customer Access web site:

  http://support.qlogic.com

New Features and Enhancements

The new features and enhancements added since Release 7.0 and the two previous major/minor releases for the OFED+ Host Software are listed below.

Release 7.0.1 Features

- The `iba_manage_switch` script, along with the xedge tools, is included as part of IB-Basic (OFED+) allowing customers not using the IFS software to manage externally managed switches. Unlike FastFabric, it is designed to operate on one switch at a time, taking a mandatory target GUID parameter.

  Refer to the *QLogic OFED+ Host Software User Guide* for more information.

- Performance tuning parameters for the QLE7340 and QLE7342 drivers can now be set on a per port or per unit basis. If there are two Host Channel Adapters in a server, settings for one Host Channel Adapter can be optimized for storage traffic and settings for the other Host Channel Adapter can be optimized for MPI traffic. Please see the *QLogic OFED+ Host Software User Guide* for details.

Release 7.0 Features

- The automatic performance tuning utility: `ipath_perf_tuning` can be run as root to set the qib driver parameters in the `modprobe.conf` file. The utility can be run without parameters to do a minimal, safe amount of tuning, or the *OFED+ Host Software User Guide* describes how to run the utility interactively to tune node performance for more situations, such as to improve parallel storage performance, or to turn off unneeded services.

- The QLogic Congestion Control Architecture (CCA) uses the Performance Scaled Messaging (PSM) library which is included within QLogic OFED+. The QLogic Fabric Manager is required to enable and manage QLogic CCA. For information about QLogic CCA, refer to the “Fabric Manager Features, Release 7.0” section in the *QLogic InfiniBand Fabric Suite Software Release Notes* and the *QLogic Fabric Manager User Guide*.

Release 6.1 Features

- QLogic OFED+ Host software version 6.1 has been tested with, and fully supports, OpenFabrics Enterprise Distribution (OFED) 1.5.3, including the QLogic patch sent to OFED for their 1.5.3.1 patch release.

  Important note: As a result of a software fix from QLogic that was needed to correct a problem introduced by Mellanox, the full OFED release number is 1.5.3.1. The 1.5.3.1 package is a complete release of OFED 1.5.3 plus the minor software fix.

- The OFED mlx4 Driver is now a separately selectable component identified by ofed_mlx4. It can also be separately selected to autostart. QLogic recommends when installing QLogic Host Channel Adapters in systems with Mellanox 10GE NIC LOM, not to install the OFED mlx4 Driver component so that the proper 10GE mlx4_core driver will be used. The “iba” component will continue to include the mlx4 driver; however the “ib_stack” component no longer includes mlx4.

- The patch for support of the NVIDIA 3.x releases is now included in the tar file. To install on systems with NVIDIA GPUs, see the `README-first.txt` file in the `QLogicIB-*/NVIDIA` directory.

Operating Environments Supported

The Release 7.0.1 version of OFED+ Host Software allows for the Operating Systems listed in Table 1-1.

Table 1-1. Operating Environments Supported

Operating System	Update/ SP	Version
Red Hat EL5 X86_64 (AMD Opteron and Intel EM64T)	Update 4	2.6.18-164.el5 2.6.18-164.6.1.el5 2.6.18-164.9.1.el5
	Update 5	2.6.18-194.el5 2.6.18-194.3.1.el5
	Update 6	2.6.18-238.el5
	Update 7	2.6.18-274.el5
Red Hat EL6 X86_64 (AMD Opteron and Intel EM64T)	Base	2.6.32-71.el6.x86_64
	Update 1	2.6.32-131.0.15.el6.x86_64
SuSE Linux Enterprise Server (SLES) 10.0 X86_64 (AMD Opteron and Intel EM64T)	SP3	2.6.16.60-0.54.5-smp 2.6.16.60-0.54.5-debug 2.6.16.60-0.54.5-default
	SP4	2.6.16.60-0.85.1
SuSE Linux Enterprise Server (SLES) 11.0 X86_64 (AMD Opteron and Intel EM64T)	SP1	2.6.32.12-0.7-default
CentOS X86_64 (AMD Opteron and Intel EM64T)	Update 5.4	2.6.18-164.el5
	Update 5.5	2.6.18-194.el5
	Update 5.6	2.6.18-238.el5
	Update 6.0	2.6.32-71.el6.x86_64
Scientific Linux X86_64	Update 5.4	2.6.18-164.el5
	Update 5.5	2.6.18-194.el5
	Update 5.6	2.6.18-238.el5
	Update 6.0	2.6.32-71.el6.x86_64

Table 1-1. Operating Environments Supported (Continued)

Operating System	Update/ SP	Version
	Update 6.1	2.6.32-131.0.15.el6.x86_64
Rocks	5.3.2	2.6.18-194.el5 2.6.18-194.3.1.el5
Platform Cluster Manager 3.0 Standard Edition	RHEL 5.6	2.6.18-238.el5
	SLES 11 SP1	2.6.32.12-0.7-default
Platform Cluster Manager 3.0.1 Standard Edition	RHEL 6.1	2.6.32-131.0.15.el6.x86_64
Platform Cluster Manager 3.0.1 Dell Edition	RHEL 6.1	2.6.32-131.0.15.el6.x86_64

CPU model of Linux kernel can be identified by `uname -m` and `/proc/cpuinfo` shown in Table 1-2

Table 1-2. CPU Model of Linux Kernel

Model	uname	/proc/cpuinfo
EM64T	x86_64	Intel CPUs
Opteron®	x86_64	AMD CPUs

NOTE: Other combinations (such as i586 uname) are not currently supported.

Qualified Parallel File Systems

Lustre and IBM General Parallel File System (GPFS) listed below have been tested for use with this release of the QLogic OFED+ host software using the operating systems listed below:

- Lustre 2.1
  - RHEL 5.6
  - RHEL 6.1
- IBM GPFS 3.3 and 3.4
  - RHEL 5.7
  - RHEL 6.0
  - RHEL 6.1
  - SLES10 SP4
  - SLES 11 SP1

Refer to the QLogic *OFED+ Host Software User Guide* for the latest configuration recommendations for optimizing Lustre and GPFS performance with QLogic TrueScale InfiniBand.

Hardware Supported

Table 1-3 list the hardware supported in this release.

Table 1-3. Hardware Supported

QLE7240-V1
QLE7280-V1
QLE7340
QLE7342
QME7342
QMH7342
QME7362
MHGH28-*
MHGH29-*
MHGS18-XTC
MHGA28-XTC
MHQH29-XTC
MHQH29B-XTR
MHQH19-XTC
MHQH19B-XTR
NC543i (HP SL390 G7 in-built InfiniBand Host Channel Adapter)
46M2199
46M2203

Installation Requirements

The following list any special or release specific installation requirements for this release.

Special PCM Installation for RHEL 5.6 and SLES 11 SP1

Platform PCM 3.0 Standard Edition for RHEL 5.6 and SLES 11 SP1 requires an updated RPM to enable the QLogic GUI (portal) menu items for launching FastFabric and Fabric Viewer. The RPM can be obtained from Platform Computing's web site. Once installed, these menu items are available in the **Common Tasks** drop down menu on the Platform portal main screen (dashboard view).

To install the PCM using the builds, use the following instructions:

1. Set up head (Installer) node with RHEL5.6 or SLES 11 SP1 by following the instructions in the *Installing Platform HPC guide* (`Platform_hpc_install.pdf` file).
2. Copy the build required for your distribution iso file, the portal RPM file, the QLogic IFS and OFED kit files, and the license file to the installer node as root.
3. Mount the iso file (with `-o loop` option) for the build required for your distribution and run the pcm-installer to get started. Perform the installation procedure in Section 7 of the *QLogic Fabric Software Installation Guide*. Remember to remove the following two PCM kits:

   ```
   platform-hpc-high-performance-computing-tools
   platform-ofed
   ```

   and to add the QLogic IFS and OFED kits (be sure to use the required kits for your distribution).
4. Let the PCM installation finish, and add the compute nodes as per PCM instructions.
5. Replace the portal RPM with the patch that enables the QLogic FF and FV menu items as follows:
   a. Log on installer node as root, remove the old rpm package:

      ```
      # rpm -e platform-hpc-web-portal --nodeps
      ```

b. Back up the QLogic GUI files (an XML file and the FV Java applet files):

```
# cd /usr/share/pmc; tar cvzf ~/qlogic_gui.tgz
gui/3.0/tomcat/webapps/platform/customApplets/FabricViewe
r
gui/conf/custom/menu/QLogicButtons.xml; cd -
```

c. Remove all old installation files:

```
# rm -rf /usr/share/pmc/*
```

d. Install the updated rpm package (from the Platform Computing web site):

```
# rpm -ivh
platform-hpc-web-portal-VERSION-Date.x86_64.rpm
```

e. Restore the QLogic GUI files:

```
# cd /usr/share/pmc; tar xvzf ~/qlogic_gui.tgz; cd -
```

f. Run the integration command to setup the GUI:

```
# /opt/kusu/bin/kusurc
```

g. Register license using hpc-license-tool command.

h. Login the web portal and check the new features.

Changes for this Release

The following sections describe the changes that have been made to the QLogic OFED+ Host software package between versions 6.1.0.0.72 and 7.0.1.0.x, including the following releases:

- 6.1.0.0.72
- 7.0.0.0.35
- 7.0.1.0.x

For detailed information about any of the previous releases listed, refer to the Release Notes for the specific version.

Changes to Hardware Support

Table 1-4 shows the new hardware supported for the releases listed.

Table 1-4. Changes to Hardware Support

Release	Supported Hardware Added
6.1.0.0.72	QME7362 SL390 G7
7.0.0.0.35	MHGH28-* MHGH29-* MHGS18-XTC MHGA28-XTC
7.0.1.0.43	None

Changes to Operating System Support

Table 1-5 shows the new operating systems supported for the releases listed.

Table 1-5. Changes to Operating System Support

Release	Supported Operating System Added
6.1.0.0.72	Red Hat EL6 X86_64 (AMD Opteron and Intel EM64T): ■ (Base) 2.6.32-71.el6.x86_64
7.0.0.0.35	Red Hat EL5 X86_64 (AMD Opteron and Intel EM64T): ■ (Update 6) 2.6.18-238.el5 Red Hat EL6 X86_64 (AMD Opteron and Intel EM64T): ■ (Update 1) 2.6.32-131.0.15.el6.x86_64 CentOS X86_64 (AMD Opteron and Intel EM64T): ■ (Update 5.6) 2.6.18-238.el5 ■ (Update 6.0) 2.6.32-71.el6.x86_64 Scientific Linux X86_64: ■ (Update 5.6) 2.6.18-238.el5 ■ (Update 6.0) 2.6.32-71.el6.x86_64 Platform Cluster Manager 3.0 Standard Edition: ■ (RHEL 5.6) 2.6.18-238.el5 ■ (SLES 11 SP1) 2.6.32.12-0.7-default Platform Cluster Manager 3.0.1 Dell Edition: ■ (RHEL 6.1) 2.6.32-131.0.15.el6.x86_64
7.0.1.0.43	Red Hat EL5 X86_64 (AMD Opteron and Intel EM64T): ■ (Update 7) 2.6.18-274.el5 SuSE Linux Enterprise Server (SLES) 10.0 X86_64 (AMD Opteron and Intel EM64T) ■ (SP4) 2.6.16.60-0.85.1 Scientific Linux X86_64: ■ (Update 6.1) 2.6.32-131.0.15.el6.x86_64 Platform Cluster Manager 3.0.1 Standard Edition: ■ (RHEL 6.1) 2.6.32-131.0.15.el6.x86_64

Changes to Software Components

Table 1-6 shows the new software components supported for the releases listed.

Table 1-6. Changes to Software Component Support

Release	Supported Hardware Added
6.1.0.0.72	QLogic OFED+ Software QLogic InfiniBand Tools Software
7.0.0.0.35	QLogic OFED+ Software QLogic InfiniBand Tools Software
7.0.1.0.43	QLogic OFED+ Software QLogic InfiniBand Tools Software

Changes to Industry Standards Compliance

Table 1-7 shows each Basic OFED version that is support and the QLogic OFED+ Releases that include each

Table 1-7. Changes to Industry Standards Compliance

Basic OFED Software Package Supported	QLogic OFED+ Host Software Package
Version 1.5.3 (Refer to Release 6.1 Features for more information)	Release 6.1.0.0.72, and 7.0.0.0.35
Version 1.5.3.2	Release 7.0.1.0.43

Product Constraints

The following is a list of product constrains for this release:

- The version of OpenMPI shipped with QLogicIFS is incompatible with the Performance Application Programming Interface (“papi”) libraries available in RedHat Enterprise version 6. If you try to recompile the provided version of OpenMPI on RedHat 6 you will first have to uninstall any installed version of papi-4.x. Older versions of papi (papi-3.x) are still compatible with the shipped version of OpenMPI.
- All installation and uninstallation of QLogic OFED+ Host software package components must be performed using the `./INSTALL` or `iba_config` commands. If software is manually installed or uninstalled using other methods (RPM, other scripts, and so on), the installation on the system

could become inconsistent and cause unreliable operation, in which case subsequent runs of `./INSTALL` or `iba_config` may make incorrect conclusions about the configuration of the system and consequently make incorrect recommendations. If the system becomes inconsistently configured, QLogic recommends running the `./INSTALL` TUI and selecting `ReInstall` on all components. Once the re-installation has started, carefully review all prompts and choices.

- On SuSE systems, NETWORKMANAGER must be set to “no” in `/etc/sysconfig/network/config`. This is the default setting.
- The `mpirun` command in this release is not compatible with nodes running InfiniPath releases prior to version 2.2.1.
- OFED SDP has not been qualified for this release. IPoIB is recommended for data transfers.

Product Limitations

The following is a list of product limitations for this release:

- QLogic products will auto-negotiate with devices that utilize IBTA-compliant auto-negotiation. When attaching QLogic products to a third-party device, the bit error rate is optimized if the third-party device utilizes attenuation-based tuning.
- At the time of this release, Oracle has not certified InfiniBand adapters for RDS. As a result, QLogic is unable to extend support for RDS.
- At the time of this release, the PathScale Compiler Suite is not supported for SLES11. As a result, QLogic is unable to extend support for this environment.

Other Information

The following is a list of “need to know” information for this release:

- When using Mellanox Host Channel Adapters, any changes to Virtual Fabrics (vFabrics) in the Fabric Manager, may require a reboot of the hosts with Mellanox Host Channel Adapters. This limitation relates to the Mellanox Host Channel Adapters not properly responding to changes to the Fabric Manager service level (SL). For some vFabric configuration changes, if the Fabric Manager SL changes or is mapped to a different Virtual Lane (VL) than previously, the Mellanox Host Channel Adapter can continue to use the previous VL. If that VL is presently disabled by the Fabric Manager, future uses of applications which use the Fabric Manager SL may hang or timeout because there are no VL Arbitration cycles for that VL. As a result, anytime vFabric configuration is changed, it is recommended to reboot all hosts with Mellanox Host Channel Adapters so that the desired Quality of Service (QoS) configuration changes fully take effect. Any hosts with QLogic Host Channel Adapters will not need to be rebooted.

  Due to Mellanox Host Channel Adapters not correctly handling changes to the Fabric Manager SL, QLogic recommends that all the hosts using Mellanox ConnectX or ConnectX-2 Host Channel Adapters be rebooted when used in a virtual fabric configuration.

- When Dispersive Routing is enabled, it allows packets sent using an MPI program run over PSM to take any one of several routes through a fabric, thus often increasing performance. The number of routes is determined by the value of 2 to the power of the Lid Mask Control setting (LMC). Because LMC defaults to 0, the default number of routes through the fabric is 2^0 or 1. LMC can be set as high as 3, allowing a total number of 2_3 or 8 routes through the fabric. Providing these additional routes can reduce fabric congestion, and thus improve performance. Dispersive Routing is supported when the Qlogic Fabric Manager is used in the fabric. Dispersive Routing is not supported when using OpenSM.

- The current release of mvapich2 may have a memory management issue on certain machines and certain MPI applications. If MPI applications hang when using MVAPICH2, try using these settings with your application:

  ```
  MV2_IBA_EAGER_THRESHOLD=16384 MV2_VBUF_TOTAL_SIZE=16384
  ```

  When using QLogic's sample applications, these settings can be passed using the ofed.mvapich2.params file (in `/opt/iba/src/mpi_apps` folder). For other applications, they can be passed as part of the `mpirun` command.

- When running MVAPICH2, QLogic recommends turning off RDMA fast path. To turn off RDMA fast path, specify `MV2_USE_RDMA_FAST_PATH=0` in the `mpirun_rsh` command line or set this option in the parameter file for mvapich2.

- Older QLogic InfiniPath 2.2.1 and prior releases will not be recognized in the installation menus and will be treated as if no InfiniBand software is installed.
- When upgrading from an older QLogic OFED+ release to a new QLogic OFED+, the older QLogic OFED+ release will be uninstalled first.
- When installing the OFED Debug Info component, make sure that `~/.rpmmacros` does not have any lines changing the `%debug_package` macro.

  If `%debug_package` is set to `%{nil}`, debuginfo RPMs will not be available for installation.

  The current setting for this parameter can be verified using:

  ```
  rpm --eval '%{debug_package}'
  ```

  If a non-blank output occurs, then `debuginfo` is enabled. If a blank line is output, then `debuginfo` is disabled on the present system.
- When running QLogic SRP over two ports in round robin mode, performance is degraded.
- When running verbs-based benchmarks such as ib_send_bw, the following message may appear:

  ```
  BUG: soft lockup - CPU#1 stuck for 10s.
  ```

  This message does not impact completion or correctness of the benchmark.
- The `ib_send_bw` benchmark, when run in UC mode, is written such that it will hang if even one packet is dropped.
- The QLogic 12000 series switch firmware must be at version 6.0.0.1.2 or later to connect with the TrueScale Host Channel Adapters in this release.
- QLE7240/QLE7280 performance with Barcelona stepping B2 and the BIOS/kernel workaround for AMD errata 298 can lead to reduced InfiniBand bandwidth, as a result of poor memory bandwidth and latency on the adapters due to the workaround. To fix this problem, upgrade to Barcelona stepping B3 (or later).

- `mpirun-debug` option fails to open xterm windows. A race condition may occur when there are multiple processes trying to lock the `$HOME/.Xauthority` file concurrently. An error similar to this may occur:

  ```
  /usr/X11R6/bin/xauth: error in locking authority file
  /home/<user>/.Xauthority
  ```

  Disable X11 forwarding by setting the environment variable $MPI_SHELL_X='ssh -x'. Then set the DISPLAY environment variable with the `mpirun -display` option. For example:

  ```
  env MPI_SHELL_X='ssh -x' mpirun -debug -display\
  <X11_display_hostname:display_number.screen_number> [...]
  (continued on same line)
  ```

- An SRP write performance bug between QLE7240/QLE7280 and LSI (Engenio) storage systems was fixed. To apply this fix, modify the `srp_sg_tablesize` and `max_sect` parameters. To modify `srp_sg_tablesize`, do one of the following:

  - Add the following line to `/etc/modprobe.conf`:

    ```
    options ib_srp srp_sg_tablesize=80
    ```

  - Define `srp_sg_tablesize` when adding the ib_srp module (as root):

    ```
    modprobe ib_srp srp_sg_tablesize=80
    ```

  - If using `srp_daemon`, modify `max_sect` by adding the following command to `/etc/srp_daemon.conf` file:

    ```
    a id_ext=200500A0B81146A1,ioc_guid=00a0b80200402bef
    ,max_sect=2048
    ```

- To ensure proper operation of MPI, the QLogic OFED+ INSTALL sets the memory locking limits in the `/etc/security/limits.conf` file to unlimited, due to the large amounts of memory needed to run the MPIs. Open MPI recommends using unlimited ulimits for lockable memory. For more information, see:

  http://www.open-mpi.org/faq/?category=openfabrics#ib-locked-pages

  An alternative is to use the `--mca mpi_leave_pinned 1` option with `mpirun`.

- When users increase the number of processes beyond the number of open files allowed by ulimit, `mpirun` prints an error message. The ulimit for the number of open files is typically 1024 on both Red Hat and SLES. The message will look similar to the following:

  ```
  MPIRUN.up001: Warning: ulimit for the number of open files is
  only 1024, but this mpirun request requires at least number of
  files open files (sockets). The shell ulimit for open files
  needs to be increased. This is due to limit:
  descriptors 1024
  ```

  The ulimit can be increased; QLogic recommends an increase of approximately 20 percent over the number of CPUs. For example, in the case of 2048 CPUs, ulimit could be increased to 2500: `ulimit -n 2500`. Increase the ulimit only on the host where `mpirun` was started, unless the mode of operation allows `mpirun` from any node.

Documentation

Table 1-8 lists the Release 7.0.1 related documentation. All related documentation is available on the QLogic download site.

Documentation for QLogic's Partners is available at the venders web site.

Table 1-8. Related Documentation for this Release

Document Title	Document Number	Revision
QLogic OFED+ Documents		
Installation Guide - QLogic Fabric Software	IB0053302-01	B
User Guide - QLogic OFED+ Host Software	IB0054606-01	B
QLogic InfiniBand Fabric Suite Documents		
User Guide, QLogic Fast Fabric	IB0054607-01	B
User Guide, QLogic Fabric Manager	IB0054608-01	B
Reference Guide, QLogic Fast Fabric Command Line Interface	IB0054509-01	B
QLogic Fabric Viewer Documents		
Online Help, QLogic Fabric Viewer	N/A	N/A

2 System Issues for Release 7.0.1

Introduction

This section provides a list of the resolved Issues in the OFED+ Host Software that were verified by this release. It also lists the open Issues with a description and workaround for each.

Resolved Issues in this Release

Table 2-1 is a list of issues that are resolved in this and the previous two releases.

Table 2-1. Resolved Issues

Product	Release	Description
TrueScale/ Driver	6.1.0.0.72	When running bidirectional traffic on a QLogic Host Channel Adapter in unreliable connection (UC) mode, the Ethernet connection no longer drops and the adapter no longer exhibits panics.
TrueScale/ Driver	6.1.0.0.72	In this release (6.1.0), OFED has been updated to OFED 1.5.3 and the `ib_send_bw` microbenchmark that comes with OFED 1.5.3 does not need the `-an` option to run properly without hanging.
IFS/ VNIC3	6.1.0.0.72	In this release (6.1.0), VNIC drivers are no longer supported, therefore all VNIC known issues are closed.

Table 2-1. Resolved Issues

Product	Release	Description
IFS/ IPoIB	6.1.0.0.72	In this release (6.1.0), Red Hat Enterprise Linux (RHEL) 4 is no longer supported, therefore all RHEL4 known issues are closed.
IFS/ VNIC3	7.0.0.0.35	`unregister_netdevice` hangs while restarting VNIC service on the host with a TrueScale Host Channel Adapter when using a gateway. This is a known issue in the Linux kernel in all releases prior to 2.6.27. VNIC drivers are no longer supported. Therefore all VNIC known issues are closed.
IFS/ IBAccess	7.0.0.0.35	When canceling out of a Host Channel Adapter firmware update, the following message is no longer shown: `HCA update failed. Return code: 1 at /usr/bin/qlgc_firmware_tool line 264, STDIN line 2.`
IFS/ IBAccess	7.0.0.0.35	When using opensm, the Node Description reported for hosts after they are rebooted is no longer incorrect.
TrueScale/ Driver	7.0.0.0.35	The known issue that when a long netperf test is run between hosts using QLE7240 and QLE7280 DDR Host Channel Adapters, the PM is unable to get or set port counters for these Host Channel Adapters is no longer a supported scenario.
IB Third Party/ OFED	7.0.0.0.35	When running the OFED performance benchmark `qperf` to test the bandwidth of Unreliable Datagram (UD) traffic, the command no longer hangs or times out intermittently when using an InfiniBand MTU of 4096 bytes and the `-t 10` (or larger number of seconds) option.
IFS/ IBAccess	7.0.0.0.35	When performing an IFS installation on SLES 11 SP1, the message similar to the following no longer appears: `WARNING: -e needs -E or -F`
TrueScale/ OpenIB	7.0.0.0.35	On SLES 11 or SLES 11 SP1 environments, when running `qperf rc_bi_bw` or `rc_rdma_read_lat` tests, the system no longer has a kernel panic causing it to drop a `vmcore` file and reboot. This kernel panic does not occur with OFED 1.5.3.

Table 2-1. Resolved Issues

Product	Release	Description
TrueScale/ MPIs	7.0.0.0.35	Running MPI microbenchmarks over verbs does not exhibit low performance using the `osu_bw` and `osu_bibw` tests.
TrueScale/ MPIs	7.0.1.0.43	The QLogic MPI programs now run properly after a QLogicIB installation on a freshly kick-started RHEL 6 node.

Known Issues

The subsections below catalog the known open issues for the release as well as a description and a workaround by component.

Severity

This document provides a level of severity for each issue listed The levels are:

- **Critical** – Could result in a service outage
- **Major** – Could degrade system performance
- **Minor** – Could cause minimal impact to ongoing operations
- **None** – No operational impact

Open Issues Table

Table 2-2 is the list of open issues for Release 7.0.1. The table is sorted by Severity then Product.

Table 2-2. Open Issues

Product/ Component	Severity	Description	Workaround
TrueScale/ Driver	Major	RHEL6.1 distribution of InfiniBand software (included with the OS distribution) has a problem that is causing page faults or kernel panics on greater than 16 core servers when a TrueScale HCA is installed with an InfiniBand cable connected to the fabric.	In order to successfully install IFS or QOFED+ Host Software do one of the following: ■ Disconnect IB cable ■ Blacklist ib_qib driver during RHEL6.1 install if using PXE boot by adding the following line `blacklist=ib_qib` to the `anaconda-ks.cfg` configuration file or kickstart profile under the kernel options. If manually installing RHEL6.1, append `blacklist=ib_qib` during the install (hit the Tab option) on the kernel boot line. Once RHEL6.1 is installed along with IFS or QOFED+ Host Software, remove the `blacklist=ib_qib` line from `/etc/modprobe.d/anaconda.conf` before rebooting.
IFS/ Install/Uninstall	Major	When installing the QLogic-Basic (QLogic OFED+) or QLogic-IFS SW on SLES10 SP3, there may be conflicts with software that is already installed on the system. The following message may appear: `error: %preun(ofed-1.4.1-0.14.9.x86_64) scriptlet failed, exit status 1`	Manually uninstall the old version OFED before you install the newer software. As root, run the following command: `rpm -e --noscripts ofed` Re-run the normal installation.

Table 2-2. Open Issues

Product/ Component	Severity	Description	Workaround

IFS/ Install/Uninstall	Major	When installing the QLogic-Basic (QLogic OFED+) or QLogic-IFS SW on SLES11SP1, there may be conflicts with software that is already installed on the system. The following message may appear:
		`error: %preun(ofed-1.4.2-0.9.6.x86_64) scriptlet failed, exit status 1`
		`error: %preun(opensm-3.2.6_20090317-0.1.42 .x86_64)scriptlet failed, exit status 1`
		`Unable to uninstall previous OFED RPMs`
			Manually uninstall the old version OFED before you install the newer software.
			1. As root, run the following command:
			`rpm -e --noscripts ofed`
			2. Re-run the normal installation.

IFS/ MPI	Major	If `LD_LIBRARY_PATH` is exported inconsistently with the version of openmpi being used, applications may build or run incorrectly. This issue can impact FastFabric tools that use MPI, rebuilding of mpi apps, or rebuilding openmpi itself using the `do_build` or `do_openmpi_build` tools.	When using openmpi, make sure `PATH` and `LD_LIBRARY_PATH` are not exported specifying a different path than the openmpi path that is being used. The mpi-selector can configure a `LD_LIBRARY_PATH` for subsequent log ins. openmpi does not require the `LD_LIBRARY_PATH` to be set.
IB Third Party/ PCM/LSF	Major	The FastFabric and Fabric Viewer options do not show on the PCM GUI with RHEL 5.6 and SLES 11 SP1.	Refer to Special PCM Installation for RHEL 5.6 and SLES 11 SP1 in Section 1 for special instructions to install the PCM on a system with RHEL 5.6 or SLES 11 SP1 Operating Systems.

Table 2-2. Open Issues

Product/ Component	Severity	Description	Workaround
IB Third Party/ PCM/LSF	Major	LSF job submission does not work correctly with PCM	Obtain the patched binaries for “blaunch” and “res” from Platform which has made the files available as `blaunch.706` and `res.706`. Replace these two files on all the nodes in the cluster. The directory locations of the files are: `/opt/lsf/7.0/linux2.6-glibc2.3-x86_64/bin/blaunch` `/opt/lsf/7.0/linux2.6-glibc2.3-x86_64/etc/res`
TrueScale/ Driver	Minor	In a dual-HCA system, if cfgctxts is set in modprobe.conf only for HCA unit 1, and there is no default value explicitly entered, then HCA unit 0 will have 0 available contexts and MPI cannot run.	Setting HCA0 only with no default is ok. Setting HCA1 only with a default is also ok.
TrueScale/ Driver	Minor	When the per-unit `singleport` setting in modprobe.conf is specified for only qib1, with no default explicitly stated, then qib0 always acts as if `singleport` is set.	Explicitly specify the value for qib0 in the `modprobe.conf` or equivalent setting.
TrueScale/ Driver	Minor	When the per-unit `pcie_coalesce` setting in modprobe.conf is specified for only qib1, with no default explicitly stated, then qib0 always acts as if `pcie_coalesce` is set on it as well.	Explicitly specify the value for qib0 in the `modprobe.conf` or equivalent setting.
IFS/ IBAccess	Minor	When a port is down and does not have a LID assigned, `clear_p1stats` or `clear_p2stats` will fail against the given port	None

Table 2-2. Open Issues

Product/ Component	Severity	Description	Workaround
IFS/ IBAccess	Minor	For SLES10 and 11, the `--32bit` option of `./INSTALL` does not work. For individual Red Hat Package Manager (RPM) installs, SLES10 and 11 do not distinguish between 32-bit and 64-bit RPMs.	Installed RPMs that are 32-bit must be manually uninstalled first and then the appropriate RPM for each package (only 64-bit if available) must be installed. QLogic recommends using `./INSTALL`, which automatically performs all necessary uninstalls of old RPMs prior to installing the new 64-bit RPMs.
IFS/ IBAccess	Minor	When using vFabric, the OFED `saquery` command may use the wrong P-Key and timeout waiting for responses.	QLogic recommends using the `iba_saquery` tool, which is included with QLogicIB-Basic or QLogicIB-IFS. `iba_saquery` will work properly when vFabric is configured.
IFS/ Open SM	Minor	When using opensm, after bouncing ports on a node, the port may not return to an active state for a period of time. As a result, commands that issue an SA query such as OFED's `saquery` command, or various FastFabric tools such as `iba_report` and `iba_saquery`, may hang waiting for the port to become active and the SA to respond.	Restart opensm. QLogic recommends using the QLogic Fabric Manager, which has much greater resiliency and quicker handling of port state changes.
IFS/ IPoIB	Minor	When using vFabric to change an IPoIB application from Networking to Non-Networking, the IPoIB interface may remain in a running state.	After changing the application, restart the network services or bring the interface down/up to force IPoIB to re-query the SM and correct the situation.

Table 2-2. Open Issues

Product/ Component	Severity	Description	Workaround
IFS/ MPI2	Minor	When uninstalling MVAPICH2 (for verbs or PSM), some files under the `/usr/mpi/*/mvapich2*/` directory tree that are created at runtime by MVAPICH2 may not be removed. One example is `mpdlib.pyc`.	After uninstalling, remove any undesired files left in the `/usr/mpi/` directory.
IFS/ Other	Minor	After installing IFS on a Lustre1.8.5 patched kernel, there can be a lot of messages in `dmesg` from `ib_iser` complaining about Unknown symbol.	Disabling `iscsi` and `iscsid` via `chkconfig` resolves the issue.
IB Third Party/ OFED	Minor	Test `rdma_bw` fails if it detects conflicting CPU frequencies.	Ensure that the same cpu frequencies are at both ends when using `rdma_bw`.
IB Third Party/ PCM/LSF	Minor	The **Command Task** drop-down in the PCM GUI does not always show all of the options properly.	None

IB Third Party/ Other	Minor	When installing Moab, the following error is seen:
		`[nsgib103 .ssh (Thu May 12 05:43:36)]# ldconfig`
		`ldconfig: /usr/local/lib/libsqlite3.so.0 is not a symbolic link`
			Move/Delete `libsqlite3.so.0` files and execute `ldconfig` command.
			`ldconfig` can create symbolic link properly and the error message will not appear.

Table 2-2. Open Issues

Product/ Component	Severity	Description	Workaround
IFS/ Open SM	None	When reinstalling QLogic OFED+, it may try to stop existing instances of opensm. If opensm is not presently running, it will report: `Stopping IB Subnet Manager [FAILED].`	QLogic recommends using the QLogic Fabric Manager. If the QLogic Fabric Manager is installed instead of opensm, this error will not occur.

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